Abstract of the Disclosure:

In an alignment or overlay measurement of patterns on a semiconductor wafer an error that occurs during the measurement in one of a predefined number of alignment structures in an exposure field of a corresponding predefined set of exposure fields can be handled by selecting an alignment structure in a substitute exposure field. The latter exposure field need not be part of the predefined set of exposure fields, that is, an inter-field change may be effected. The number of alignment measurements on a wafer remains constant and the quality is increased. Alternatively, when using another alignment structure in the same exposure field - by effecting an intra-field change - the method becomes particularly advantageous when different minimum structure sizes are considered for the substitute targets. Due to the different selectivity in, say, a previous CMP process, such targets might not erode and do not cause an error in a measurement, thus providing an increased alignment or overlay quality.

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